

# Subject Index to Volume 21

## A

- Acetazolamide, acidification, testis and epididymis, E143
- Acetoacetate, kinetics, two-pool model for, E850
- Acetyl-coenzyme A carboxylase, activities, mRNA and, weaning adipose tissue, E126
- Acidification, testis and epididymis, carbonic anhydrase in, E143
- ACTH: *see* Adrenocorticotrophic hormone
- Acylcarnitine, derivatives, medium-chain triglyceride effects, E944
- Adenosine monophosphate, cyclic
  - EET effects on renin release and, renal cortical slices, E269
  - glycogenolysis mediated by, insulin effects, ventricular cardiomyocytes, E871
- production, PTH-stimulated bone resorption dissociated from, adenylate cyclase blocker effects, E708
- Adenosine triphosphate/adenosine diphosphate ratio, glucose effects, cerebral microvessels (calf), E543
- Adenylate cyclase blockers, PTH-stimulated bone resorption, cAMP production, E708
- Adipocytes
  - antibodies to, increased growth and protein deposition with, E985
  - glucose transport, IGF-II stimulated, IGF-II receptors and, E534
  - preadipocyte replication, obesity and, E368
  - subcutaneous, lactate production, E888
- Adipose tissue
  - brown: *see* Brown fat
  - subcutaneous, lactate production, E888
  - weaning, lipogenic enzyme activities and mRNA in, E126
- ADP: *see* Adenosine diphosphate
- Adrenalectomy, thyroxine deiodinase regulation and, brown fat, E7
- Adrenocorticotrophic hormone
  - aldosterone production and, nickel effects, E555
  - interleukin 1 effects, E65
  - interleukin 1 $\beta$ -induced release, organum vasculosum of lamina terminalis and preoptic area, E163
- Aging
  - exercise effects, insulin and glucose, E937
  - norepinephrine plasma kinetics and, E256
  - prolactin release and, dopaminergic inhibition effects, E799
- Alanine, flux, forearm, growth hormone and, E86
- Aldosterone
  - ANF regulation and, hypoxia effects, E243
  - hypertension
    - intracerebroventricular corticosterone infusion effects, E649
    - RU26752 effects, E737

## production

- ANF infusion effects, E51
- stimulation by angiotensin II, nickel effects, E555
- Alloxan, diabetes effects, glutamine synthetase expression, muscle, E762
- Aluminum, bone, thyroparathyroidectomy effects, E576
- Amino acids
  - branched-chain, regulation of protein metabolism, fasting, E907
  - effluxes, muscle protein breakdown in infection determined by, E856
  - free, muscle, E485
  - metabolism
    - after intense exercise, E249
    - epinephrine effects, E948
    - regulation by epinephrine, E878
    - oxidation, branched-chain, maple syrup urine disease, E654
  - plasma, glucagon deficiency and, healthy adults, E78
- Analgesia, corticotropin-releasing factor-induced, pituitary  $\beta$ -endorphin role in, E235
- Androgen, receptor: *see* Receptors
- ANF: *see* Atrial natriuretic factor
- Angiotensin II
  - pituitary, paracrine actions of, prolactin release and, E619
  - receptors: *see* Receptors
  - regulation, liver angiotensinogen and kidney renin mRNA levels, E1
  - single lactotroph response to, E24
  - stimulation of aldosterone production, nickel effects, E555
- Angiotensinogen
  - elevated mRNA levels, liver, nephrectomy effects, E413
  - liver, regulation by angiotensin II, E1
  - 1,5-Anhydroglucitol, acute reduction of, diabetogenic agents and, E423
- ANP: *see* Atrial natriuretic peptide
- Antimineralocorticoid, steroid-induced hypertension and, E737
- Antinociception, corticotropin-releasing factor-induced, pituitary  $\beta$ -endorphin role in, E235
- Apoptosis, B, metabolism, estrogen and progesterone effects (baboon), E172
- Atherosclerosis, estrogen and progesterone effects, apoprotein B metabolism, E172
- ATP: *see* Adenosine triphosphate
- Atrial natriuretic factor
  - aldosterone regulation and, hypoxia effects, E243
  - long-term infusion, aldosterone production and, E51
- Atrial natriuretic peptide, release, exercise-induced, posture effects, E775
- Atriopetins, release, exercise-induced, posture effects, E775
- Autonomic nervous system, sympathetic regulation, insulin, somatostatin and glucagon secretion, E220
- Awake state, catecholamine output, hypoglycemia, E212

## B

- Bicarbonate, excretion, whole body protein synthesis from, E151
- Biogenesis, mitochondrial, protein synthesis, heart, E492, E503, E511
- Blockade,  $\beta$ -adrenergic, norepinephrine release and, E999
- Blood, constituents: *see* specific constituent
- Blood flow, cerebral, insulin-treated diabetics, E813
- Body, composition, resting metabolic rate relations, E990
- Bombesin, control of food intake and, E40
- Bone
  - aluminum deposition, thyroparathyroidectomy effects, E576
  - cancellous osteopenia, dehydroepiandrosterone effects in ovariectomy, E673
  - formation and resorption, epidermal growth factor, E275
  - PTH-stimulated resorption, cAMP production and, E708
  - remodeling, physical activity effects, E263
- Brain
  - capillaries, ATP/ADP ratio, glucose effects, E543
  - corticotropin-releasing hormone mRNA, differential regulation, E686
  - glucose uptake, insulin-dependent diabetics and, E805
  - intracerebroventricular corticosterone infusion
    - aldosterone hypertension and, E649
    - RU28318, mineralocorticoid hypertension, E482
  - ischemia: *see* Ischemia
- Brown fat
  - obesity, defective thermogenesis in, E320
  - thyroxine deiodinase regulation in, obesity, E7

## C

- Cachexia, tumor, insulin secretion and, E1033
- Calbindin-D9k, intestinal, 1,25-dihydroxyvitamin D $_3$  and, E377
- Calcitropic hormones, physical activity effects, E263
- Calcium
  - balance, physical activity effects, E263
  - cytosolic, PTH effects on insulin, pancreatic islets, E975
  - diets low in, 1,25-dihydroxyvitamin D $_3$  turnover and, E282
  - inflow, nifedipine resistance to, pancreatic islets, E529
  - outflow rate, tumor cachexia and, E1033
- Calcium-45, fluxes, 1,25-dihydroxyvitamin D $_3$  effects, E643
- Calcium current, voltage-dependent, gonadotropes, centrifugal elutriation and, E589
- Calcium gradient, fetomaternal, bioactive parathyroid hormone, E549

Calorimetry  
indirect, problems, E399  
protein correlation, energy metabolism, E990  
cAMP: *see* Adenosine monophosphate, cyclic  
Capillaries, cerebral, ATP/ADP ratio, glucose effects, E543  
Capsaicin, nerves sensitive to, during hypoglycemia, awake state, E212  
Carbamylcholine, insulin binding and, pancreatic acini, E562  
Carbohydrates  
dietary, effects on energy expenditure exercise effects, aging and, E937  
Carbon dioxide, partial pressure, acidification in testis and epididymis, E143  
Carbonic anhydrase, acidification and, testis and epididymis, E143  
Cardiomegaly, vitamin D<sub>3</sub> activity and, E134  
Cardiomyocytes, ventricular, insulin effects, cAMP-mediated glycogenolysis, E871  
Carnitine, metabolism, medium-chain triglyceride effects, E944  
Catecholamines  
defective metabolic effects, brown adipose tissue in obesity, E320  
galanin release and, during sympathetic stimulation, pancreas, E436  
lymphocyte  $\beta_2$ -receptors and, E191  
output, hypoglycemia and, E212  
Cations, fluxes, 1,25-dihydroxyvitamin D<sub>3</sub> effects, E643  
CCK: *see* Cholecystokinin  
cGMP: *see* Guanosine monophosphate, cyclic  
Chloride, conductance, electrophysiological responses, E311  
Cholecystokinin  
receptors: *see* Receptors  
regulatory effects of, insulin binding to pancreatic acini, E562  
Cholesterol, metabolism, estrogen and progesterone effects (baboon), E172  
Chromatography, high-performance liquid, purification of glucose, E228  
Circulation, fetoplacental, thromboxane release and vascular resistance relations, E864  
Cobalt, aldosterone production, angiotensin II and, E555  
Cognitive function, insulin treatment effects, cerebral blood flow in diabetics, E813  
Cold, acclimation, obesity, brown fat, E7  
Collagen, vitamin D<sub>3</sub> activity and, cardiovascular function, E134  
Corticosteroids, insulin resistance induced by, evolution of, E748  
Corticosterone  
interleukin 1 effects, E65  
intracerebroventricular infusion, aldosterone hypertension and, E649  
thyroxine deiodinase regulation, obesity, brown fat, E7  
Corticotropin-releasing factor, antinociception induced by, pituitary  $\beta$ -endorphin role in, E235  
Corticotropin-releasing hormone  
differential regulation, brain, E686  
interleukin 1 effects, E65  
Cortisol  
glucagon interactions, glucose turnover and, E569

responses, illusory self-motion, E304  
Cyclase,  $\beta$ -receptors and, skeletal fiber types, endurance training effects, E71  
Cycloheximide, protein metabolism and, muscle, after exercise, E92  
Cytochrome P 450, metabolites, renin release and, renal cortical slices, E269  
Cytotoxic antibodies, adipocytes, increased growth and protein deposition with, E985

## D

Dehydroepiandrosterone, cancellous bone osteopenia and, ovariectomy, E673  
Deoxyglucose  
acute reduction of 1,5-anhydroglucitol and, E423  
effects on food intake, lean and fatty rats, E476  
Dexamethasone  
elevated mRNA levels, liver, nephrectomy effects, E413  
insulin resistance induced by, evolution of, E748  
Diabetes  
glutamine synthetase expression and, skeletal muscle, E762  
glycogen synthesis in, myocardial, E184  
impaired insulin action, liver, vanadate effects, E459  
insulin-dependent  
glucose uptake in brain and, E805  
myocardial metabolism with coronary artery disease, E606  
insulin treatment in, cerebral blood flow and substrate utilization, E813  
non-insulin-dependent, dietary fat and carbohydrate effects, E347  
somatostatin, vasopressin, and oxytocin synthesis, hypothalamus, E661  
Diabetes mellitus, energy expenditure, dietary fat and carbohydrate effects, E347  
Diabetogenic agents, acute reduction of 1, 5-anhydroglucitol and, E423  
Diacylglycerol, stimulation, thyroid cell alkalization, E445  
Dihydropyridines, angiotensin II effects on aldosterone production, nickel potentiation of, E555  
5 $\alpha$ -Dihydrotestosterone, binding, penile androgen receptor downregulation, E46  
1,25-Dihydroxyvitamin D<sub>3</sub>: *see* Vitamin D<sub>3</sub>  
Dopamine  
responses, illusory self-motion, E304  
single lactotroph response to, E24

## E

EET: *see* Epoxyeicosatrienoic acid  
Eicosanoid, production, vascular tissue and placenta, E418  
Electrogastrography, neuroendocrine and gastric myoelectric responses, illusory self-motion, E304  
Enalapril, regulation of liver angiotensinogen, kidney renin mRNA levels and, E1  
 $\beta$ -Endorphin  
pituitary, mediating corticotropin-releasing factor-induced antinociception, E235  
responses, illusory self-motion, E304  
Endothelin, receptors: *see* Receptors, 864

Energy  
expenditure, dietary fat and carbohydrate effects, E347  
metabolism  
amino acids and, epinephrine effects, E948  
indirect calorimetry, E399  
protein correlation with, E990  
Enzymes: *see also* specific enzyme  
lipogenic, mRNA and, adipose tissue, E126  
Epidermal growth factor  
bone formation and resorption, E275  
stimulation, thyroid cell alkalization, E445  
Epididymis, acidification by, carbonic anhydrase in, E143  
Epinephrine  
amino acid metabolism, energy metabolism and, E948  
insulin and, effects on glucose and protein metabolism, E117  
regulation, amino acid metabolism, E878  
responses, illusory self-motion, E304  
somatotropin mechanism and, lactation (cow), E582  
Epoxyeicosatrienoic acid, inhibition of renin release, renal cortical slices, E269  
Estrogen, apoprotein B metabolism and (baboon), E172  
Euglycemia, glucose storage, oxidation, and glycolysis with, skeletal muscle, E923  
Exercise  
activation enhanced by, glycogen synthase, skeletal muscle, E957  
ANP release induced by, posture effects, E775  
contractile activity, plasma membrane glucose transporters, E667  
endurance training,  $\beta$ -receptors and cyclase, skeletal fiber types, E71  
gluconeogenesis inhibition, glucose kinetics in, E203  
glucose transport and, muscle, E390  
insulin action, glucose tolerance and, aging, E937  
intense, amino acid metabolism after, E249  
physical activity  
calcitropic hormones and calcium balance, E263  
norepinephrine plasma kinetics and, E256  
recovery and, whole body and plasma protein synthesis in, E821  
triglyceride-fatty acid cycle effects, control of fat metabolism, E382

## F

Fasting  
blood glucose concentration, lipolysis, E32  
glucose production, insulin suppression of, liver, E1020  
glycogen synthesis in, myocardial, E184  
hyperglucagonemia effects, liver glycogenolysis and gluconeogenesis, E841  
hypocaloric refeeding and, protein metabolic effects, E832  
protein metabolism during, insulin and amino acid regulation of, E907  
refeeding and, placental lactogen receptors in maternal liver (sheep), E338

**Fat**

- dietary, effects on energy expenditure metabolism, control of, exercise and triacylglyceride-fatty acid cycle effects, E382
- subcutaneous, microdialysis measurement of, E918

**Fat cells: see Adipocytes****Fatty acids**

- flux, blood glucose concentration, fasting and, E32

**free**

- myocardial metabolism, diabetes and, E606
- non-steady-state, measurement of turnover, E103
- nonesterified, metabolic effects of growth hormone, E86
- transport, carnitine metabolism, triglycerides and, E944
- triglyceride cycle and, control of fat metabolism, exercise and, E382

**Fatty acid synthetase, activities, mRNA and, weaning adipose tissue, E126****Feeding**

- control, CCK receptors and vagal nerves, E40
- diet, methionine kinetics, E790
- food conversion efficiency, treatment with antibodies to adipocytes, E985
- glucose, 2-deoxyglucose, phlorizin and insulin effects, obesity and, E476
- high-protein diet, exercise and recovery, E821
- hypocaloric refeeding, prolonged fast and, protein metabolic effects, E832

**Fetus: see also Lactation; Placenta; Pregnancy**

- bioactive parathyroid hormone in, E549
- maternal placental lactogen receptors, nutritional regulation of, E338
- maternal studies and, glucose kinetics (sheep), E1006
- transplant, growth-promoting properties of internal milieu, E98

**G****Galanin, release, pancreatic, sympathetic neural activation, E436****Gastrin, control of food intake and, E40****Gastrocnemius muscle, free amino acids in, effect of fiber population and denervation, E485****Gestation**

- eicosanoids in, vascular tissues and placenta, E418
- maternal IGF-1, placental growth hormone regulation of, E1014
- prostaglandin binding during, uterus, E740

**Glucagon**

- cortisol interactions, glucose turnover and, E569
- deficiency, plasma amino acids and, healthy adults, E78
- galanin release and, during sympathetic stimulation, pancreas, E436
- secretion, mechanism of sympathetic neural regulation, E220

**Glucocorticoids**

- differential regulation, brain, E686
- thyroxine deiodinase regulation, obesity, brown fat, E7

**Gluconeogenesis**

- enhancement of glycogen, liver, E899

**inhibition, glucose kinetics in, rest and exercise, E203****Gluconeogenic precursors, enhancement of glycogen, liver, E899****Gluconeogenic substrate, glucose production relations, E288****Glucose**

- ATP/ADP ratio and, cerebral microvessels (calf), E543
- basal output, pentobarbital effects, liver, E701
- blood concentration, lipolysis regulation during fasting, E32
- concentration, endogenous, reconstruction in non-steady state, E1037
- effects on food intake, lean and fatty rats, E476
- <sup>3</sup>H-labeled, net lactate removal and, skeletal muscle, E635
- kinetics

**dexamethasone-induced insulin resistance, E748****fetal-maternal studies (sheep), E1006****gluconeogenesis inhibition and, rest and exercise, E203****metabolism****cerebral, insulin treatment effects, E813****insulin and epinephrine effects, E117****pH and hormone effects, skeletal muscle, E693****placental-fetal exchange, pregnancy (sheep), E360****production****fasting, insulin suppression of, liver, E1020****substrate supply and, E288****release, hepatic, interleukin 6 effects, E57****storage, insulin effects, skeletal muscle, E923****tolerance, insulin action and, exercise effects, aging, E937****transport****IGF-II-stimulated, fat cells, E534****muscle, exercise effects, E390****transporters, plasma membrane, insulin absence effects, E667****turnover****glucagon-cortisol interactions, E569****growth hormone effects, E86****high-performance liquid chromatography purification of, E228****variable tracer method, E16****uptake, brain, insulin-dependent diabetes and, E805****weaning, adipose tissue, E126** **$\alpha$ -Glucosidase, lysosomal, thyroid hormone and, liver, E109****Glucostasis, capsaicin-sensitive nerves, during hypoglycemia, awake state, E212****Glucosuria, acute reduction of 1,5-anhydroglucitol and, E423****Glutamine, metabolism, epinephrine effects, E948****Glutamine synthetase activity****diabetes effects, skeletal muscle, E762****neural control, skeletal muscle, E757****Glycerol****flux, forearm, growth hormone and, E86****interstitial concentration, microdialysis measurement of, E918****Glycogen****content, liver, hyperglucagonemia effects, E841****enhancement, gluconeogenic precursors, liver, E899****metabolism, hepatic, interleukin 6 effects, E57****muscle, insulin effects on contractile activity and, E667****synthesis, myocardial, diabetes and fasting, E184****Glycogenesis, glyconeogenesis and, skeletal muscle, E693****Glycogenolysis****cAMP-mediated, insulin effects, ventricular cardiomyocytes, E871****enhanced, T<sub>3</sub> treatment and, liver, E109****Glycogen phosphorylase, thyroid hormone and, liver, E109****Glycogen synthase, exercise-enhanced activation, skeletal muscle, E957****Glycolysis****ATP/ADP ratio and, cerebral microvessels, E543****insulin effects, skeletal muscle, E923****Glyconeogenesis****glycogenesis and, skeletal muscle, E693****lactate removal, skeletal muscle, E635****Gonadotropes, voltage-dependent calcium currents in, centrifugal elutriation, E589****Gonadotropin-releasing hormone calcium currents and, gonadotropes separated by centrifugal elutriation, E589****distribution and metabolism, model, E468****Growth****androgen receptor downregulation, penis, E46****increased, antibodies to adipocytes and, E985****thyroid cell, stimulation by EGF, phorbol ester, and diacylglycerol, E445****tumor, insulin secretion and, E1033****Growth hormone****insulin-like growth factor I receptors in, E329****internal milieu, pregnancy and lactation, E98****metabolic effects, forearm substrate fluxes, E86****nutritional regulation, maternal placental lactogen receptors, E338****placental, maternal IGF-1 and, pregnancy, E1014****Guanosine monophosphate, cyclic, EET effects on renin release and, renal cortical slices, E269****H****Heart****function, vitamin D<sub>3</sub> in, E134****mitochondria****protein synthesis, E492****protein synthesis and metabolism, E503****protein synthesis during hypertrophy, E511****Hepatectomy, pseudoketogenesis in, E519****Hepatocytes****glucose release, interleukin 6 stimulation of, E57****hyperinsulinemic, absence of insulin-receptor downregulation, E352**

Hepatocytes (*continued*)  
 pregnancy, angiotensin II and vasopressin receptors in, E597  
 Homocysteine, sparing, methionine kinetics and, E790  
 Hormones  
   glycogenesis and gluconeogenesis, skeletal muscle, E693  
   stimulation, hypoxia effects, E243  
 Hydrogen peroxide, glucose transport, muscle, exercise effects, E390  
 $\beta$ -Hydroxybutyrate, kinetics, two-pool model for, E850  
 25-Hydroxyvitamin D<sub>3</sub>: *see* Vitamin D<sub>3</sub>  
 Hypercalcemia, of malignancy, humoral, E297  
 Hyperglucagonemia  
   glycogenolysis and gluconeogenesis and, after fast, liver, E841  
   plasma amino acid and, healthy adults, E78  
 Hyperglycemia, cerebral ischemia in, E767  
 Hyperinsulinemia  
   absence of insulin-receptor downregulation, hepatocytes, E352  
   glucose storage, oxidation, and glycolysis with, skeletal muscle, E923  
 Hypertension  
   aldosterone, intracerebroventricular corticosterone infusion effects, E649  
   aldosterone-salt, RU28318 effects, E482  
   steroid-induced, RU26752 effects, E737  
 Hypertriglyceridemia, sepsis and, E678  
 Hypertrophy, cardiac, thyroxine-induced, mitochondrial protein synthesis during, E511  
 Hypocalcemia, vitamin D<sub>3</sub> activity and, cardiovascular function, E134  
 Hypoglycemia  
   catecholamine output during, awake state, E212  
   cerebral glucose metabolism, insulin-dependent diabetes and, E805  
   cerebral ischemia in, E767  
 Hypoparathyroidism, aluminum deposition and, bone, E576  
 Hypophosphatemia, intestinal calbindin-D9K, 1,25-dihydroxyvitamin D<sub>3</sub> and, E377  
 Hypophysectomy, regulation of corticotropin-releasing hormone mRNA, brain, E686  
 Hypothalamic-pituitary-adrenal axis, interleukin 1 stimulation of, E65  
 Hypothalamus, diabetic, somatostatin, vasopressin, and oxytocin synthesis, E661  
 Hypothermia, basal liver glucose output, pentobarbital effects, E701  
 Hypoxia  
   ANF and aldosterone regulation, E243  
   glucose transport, muscle, exercise effects, E390

**I**

IGF-I: *see* Insulin-like growth factor I  
 Immune functions, lymphocyte, catecholamines and, E191  
 Indomethacin, binding, myometrium, E740  
 Insulin  
   action  
     glucose tolerance and, exercise, effects, aging, E937  
     impaired, diabetic liver, vanadate effects, E459  
     tyrosine kinase effects, muscle, E964

amino acid metabolism, epinephrine regulation of, E878  
 binding  
   CCK effects, pancreatic acini, E562  
   computer analysis, hepatocytes, E352  
   defective metabolic effects, brown adipose tissue in obesity, E320  
 deficiency, plasma amino acids and, healthy adults, E78  
 diabetes effects, glutamine synthetase expression, muscle, E762  
 effects on food intake, lean and fatty rats, E476  
 epinephrine and, effects on glucose and protein metabolism, E117  
 galanin release and, during sympathetic stimulation, pancreas, E436  
 glucose storage, oxidation, and glycolysis with, skeletal muscle, E923  
 hypothalamic peptide synthesis, diabetes and, E661  
 infusion, continuous subcutaneous, cerebral glucose metabolism and, diabetes, E805  
 pH and hormone effects, skeletal muscle, E693  
 placental-fetal exchange, pregnancy (sheep), E360  
 plasma membrane glucose transporters, contractile activity, E667  
 protein metabolism, regulation during fasting, E907  
 protein synthesis and, skeletal muscle after exercise, E92  
 release, 1,25-dihydroxyvitamin D<sub>3</sub> effects, E643  
 resistance: *see* Resistance  
 secretion  
   mechanism of sympathetic neural regulation, E220  
   PTH effects, pancreatic islets, E975  
   tumor cachexia, E1033  
 somatotropin mechanism and, lactation (cow), E582  
 suppression  
   basal liver glucose output and, pentobarbital effects, E701  
   fasting glucose production, liver, E1020  
   sympathoadrenal interactions, potassium disposal and, E428  
   treatment, cerebral blood flow and substrate utilization, E813  
   weaning, adipose tissue, E126  
 Insulin-like growth factor II  
   maternal, placental growth hormone regulation of, pregnancy, E1014  
   receptors: *see* Receptors  
 Interleukin 1, hypothalamic-pituitary-adrenal axis, E65  
 Interleukin 6, glucose release and, liver, E57  
 Interleukin 1 $\beta$ , ACTH release induced by, organum vasculosum of lamina terminalis and preoptic area, E163  
 Intestine, 1,25-dihydroxyvitamin D<sub>3</sub> turnover, low-calcium diet effects, E282  
 Ionophore A23187, insulin binding and, pancreatic acini, E562  
 Ischemia, cerebral, normoglycemia and hypoglycemia, E767  
 Isotopes  
   dilution  
     glucose kinetics, fetal-maternal studies (sheep), E1006  
     hepatectomy and, E519

non-steady-state free fatty acid turnover, E103  
 discrimination, glucose turnover determination, E16  
 fat metabolism, control of, exercise and triglyceride-fatty acid cycle effects, E382  
 stable, glucose production and, E288

**K**

Kainic acid, interleukin 1 $\beta$ -induced release, organum vasculosum of lamina terminalis and preoptic area, E163  
 Ketoisocaproate, whole body protein synthesis, estimation, E151  
 Ketone body  
   cerebral ischemia, E767  
   kinetics, two-pool model for, E850  
   myocardial metabolism, diabetes and, E606  
   pseudoketogenesis, hepatectomy and, E519  
 Kidney  
   neurotensin metabolism, E930  
   prorenin conversion (monkey), E451  
   renin mRNA levels, regulation by angiotensin II, E1

**L**

Lactate  
   flux, forearm, growth hormone and, E86  
   gluconeogenesis, glucagon-cortisol interactions, E569  
   kinetics  
     cell heterogeneity effects, skeletal muscle, E625  
     gluconeogenesis inhibition and, rest and exercise, E203  
   metabolism, myocardial, diabetes and, E606  
   pH and hormone effects, skeletal muscle, E693  
   production, subcutaneous adipose tissue, E888  
   removal, cell type role in, skeletal muscle, E635  
 Lactation: *see also* Fetus; Placenta; Pregnancy  
   internal milieu, growth-promoting properties of, E98  
   somatotropin mechanism in (cow), E582  
 Lactogen  
   placental, regulation of maternal IGF-I, pregnancy, E1014  
   receptors: *see* Receptors  
 Lactotroph  
   single responses, dopamine, angiotensin II, and culture duration, E24  
   thyrotropin-releasing hormone of, electrophysiological responses, E311  
 LDL: *see* Lipoproteins, low density  
 Leucine  
   flux, energy metabolism and, E990  
   infused, oxidation, whole body protein synthesis from, E151  
   metabolic effects, prolonged fast and hypocaloric refeeding, E832  
   metabolism  
     epinephrine effects, E948  
     insulin and epinephrine effects, E117  
     maple syrup urine disease, E654  
     oxidation, intense exercise, E249  
 Lipids, emulsions, carnitine metabolism, triglycerides and, E944



**Lipogenesis**  
 absence of insulin-receptor downregulation, hepatocytes, E352  
 liver, kinetics, sepsis, E678

**Lipolysis**  
 blood glucose concentration in regulation of, during fasting, E32  
 control of, exercise and triglyceride-fatty acid cycle effects, E382  
 defective thermogenesis, brown fat in obesity, E320  
 interstitial glycerol concentration and, subcutaneous regions, E918  
 non-steady-state, measurement, E103

**Lipoprotein lipase, tissue, kinetics, sepsis, E678**

**Lipoproteins**  
 low density, plasma heterogeneity, liver (monkey), E1041  
 metabolism, estrogen and progesterone effects (baboon), E172  
 plasma LDL heterogeneity and, liver (monkey), E1041

**Liver**  
 angiotensinogen, regulation by angiotensin II, E1  
 basal glucose output, pentobarbital effects, E701  
 1,25-dihydroxyvitamin D<sub>3</sub> turnover, low-calcium diet effects, E282  
 elevated angiotensinogen mRNA levels and, nephrectomy and, E413  
 fasting glucose production, insulin suppression of, E1020  
 glucose output  
   glucagon-cortisol interactions, E569  
   variable tracer method of determination, E16  
 glucose release, interleukin 6 stimulation of, E57  
 glycogen, enhancement by gluconeogenic precursors, E899  
 glycogenolysis and gluconeogenesis, after prolonged fast, hyperglucagonemia effects, E841  
 impaired insulin action, diabetes, vanadate effects, E459  
 insulin-like growth factor I receptors in, E329  
 insulin resistance, dexamethasone-induced, evolution of, E748  
 maternal, fasting and refeeding effects on placental lactogen receptors (sheep), E338  
 plasma LDL heterogeneity, lipoproteins and (monkey), E1041  
 pregnancy, angiotensin II and vasopressin receptors in, E597  
 prorenin conversion (monkey), E451

**Luteinizing hormone-releasing hormone distribution and metabolism, model, E468**  
 release, pituitary angiotensin II effects, E619

**Lymphocytes,  $\beta_2$ -receptors, catecholamines and, E191**

**M**

Maple syrup urine disease, protein and leucine metabolism in, E654  
 Mesenteric artery, eicosanoids, gestation, E418  
 Metabolic rate  
   energy metabolism and amino acids, epinephrine effects, E948

resting, body composition and protein relations, E990

**Methionine, kinetics, conservation and cystine sparing, E790**

**3-O-Methylglucose, transport, muscle, exercise effects, E390**

**3-Methylhistidine**  
 effluxes, muscle protein breakdown in infection determined by, E856  
 metabolic effects, prolonged fast and hypocaloric refeeding, E832  
 protein kinetics, exercise and recovery, E821

**Metoclopramide, dopaminergic regulation, pulsatile prolactin, aging, E799**

**Microdialysis**  
 lactate production, adipose tissue, E888  
 measurement, interstitial glycerol concentration, E918

**Microsomes, liver, insulin-like growth factor I receptors in, E329**

**Mineralocorticoids**  
 hypertension, central antagonism of, E482  
 intracerebroventricular infusion, aldosterone hypertension and, E649

**Minerals, metabolism, pregnancy, E158**

**Models**  
 compartmental, 3,5,3'-triiodothyronine production, E715  
 gonadotropin-releasing hormone, distribution and metabolism, E468  
 liver, glycogen enhancement, E899  
 mathematical, endogenous glucose concentration in non-steady state, E1037  
 multicompartmental, plasma LDL heterogeneity, liver (monkey), E1041  
 parameter estimation, E727  
 3,5,3'-triiodothyronine production, thyroidal and peripheral, E715  
 two-pool, ketone body kinetics, E850

**Motion sickness, neuroendocrine and gastric myoelectric responses, illusory self-motion, E304**

**Muscle**  
 biopsy, epinephrine regulation of amino acid metabolism, E878  
 forearm, amino acid metabolism after exercise, E249  
 free amino acids in, effect of fiber population and denervation, E485  
 glucose transport, exercise effects, E390  
 net protein breakdown, infection, amino acid effluxes, E856

**Muscle, heart, gluconeogenesis inhibition, glucose kinetics in, E203**

**Muscle, skeletal**  
 contractile activity, plasma membrane glucose transporters, E667  
 exercise, insulin effects on protein synthesis, E92  
 fiber types, endurance training effects, E71  
 glucose storage, oxidation, and glycolysis in, insulin effects, E923  
 glucose transport, exercise effects, E390  
 glutamine synthetase activity  
   diabetes effects, E762  
   neural control of, E757  
 glycogen synthase, exercise-enhanced activation, E957  
 lactate kinetics, cell heterogeneity effects, E625  
 lactate removal, cell type and, E635

pH and hormone effects, glycogenesis and glyconeogenesis, E693  
 tyrosine kinase, insulin-sensitive, E964

**Muscle fibers**  
 population and denervation, free amino acids in muscle and, E485  
 type, cell heterogeneity effects on lactate kinetics, E625

**Myocardium**  
 glycogen synthesis, myocardial, diabetes and fasting, E184  
 metabolism, insulin-dependent diabetes, E606

**Myoelectric responses, neuroendocrine and gastric, illusory self-motion, E304**

**Myometrium, prostaglandin binding, during gestation, parturition, and postpartum, E740**

**N**

**Nephrectomy, elevated angiotensinogen mRNA levels and, liver, E413**

**Neural control, glutamine synthetase activity, skeletal muscle, E757**

**Neuroendocrine responses, illusory self-motion, E304**

**Neurotensin, metabolism, kidney, E930**

**Nickel, stimulation of aldosterone production and, angiotensin II, E555**

**Nifedipine, resistance to, calcium inflow, pancreatic islets, E529**

**Nitrogen**  
 excretion, whole body protein synthesis from, E151  
 metabolism, exercise and recovery, E821

**Norepinephrine**  
 defective metabolic effects, brown adipose tissue in obesity, E320  
 plasma kinetics, age and level of physical activity effects, E256  
 release,  $\beta$ -adrenergic blockade and, E999  
 responses, illusory self-motion, E304

**Nutrition**  
 parenteral, carnitine metabolism, triglycerides and, E944  
 vitamin D, 25-hydroxyvitamin D<sub>3</sub> dose effects, E780

**O**

**Obesity**  
 brown fat, defective thermogenesis in, E320  
 energy expenditure, dietary fat and carbohydrate effects, E347  
 glucose, 2-deoxyglucose, phlorizin and insulin effects, food intake, E476  
 interstitial glycerol concentration, microdialysis measurement of, E918  
 preadipocyte replication, obesity and, E368  
 thyroxine deiodinase regulation and, brown fat, E7  
 treatment with antibodies to adipocytes, E985

**1-Oleoyl-2-acetyl-glycerol, stimulation, thyroid cell alkalization, E445**

**Organum vasculosum, interleukin 1 $\beta$ -induced ACTH release and, E163**

**Osteoclasts**  
 bioactive parathyroid hormone, pregnant mother and fetus, E549  
 formation and resorption, epidermal growth factor effects, E275

**Osteopetrosis, intestinal calbindin-D9K, 1, 25-dihydroxyvitamin D<sub>3</sub> and, E377**

- Ovariectomy, dehydroepiandrosterone effects, cancellous bone osteopenia, E673  
 Oxidation, insulin effects, skeletal muscle, E923  
 Oxygen, consumption, placental, pregnancy (sheep), E360  
 Oxytocin, synthesis, diabetic hypothalamus, E661

## P

- Pancreas, galanin release, sympathetic neural activation, E436  
 Pancreatic acini, insulin binding to, CCK effects, E562  
 Pancreatic islets  
   calcium inflow, nifedipine resistance to, E529  
   insulin secretion  
     PTH effects, E975  
     tumor cachexia and, E1033  
     vitamin D<sub>3</sub>-deprived, 1,25-dihydroxyvitamin D<sub>3</sub> effects, E643  
 Parameters, local identifiability of, E727  
 Parathyroidectomy, aluminum deposition and, bone, E576  
 Parathyroid hormone  
   bioactive, pregnant mother and fetus, E549  
   bone resorption stimulated by, adenylate cyclase blocker dissociation from cAMP production, E708  
   insulin secretion and, pancreatic islets, E975  
   physical activity effects, E263  
 Parturition, prostaglandin binding during, uterus, E740  
 Penis, androgen receptor, downregulation, E46  
 Pentobarbital, glucose output and, basal, liver, E701  
 Peptides  
   brain-gut, metabolism, kidney, E930  
   parathyroid hormone-like, effects on 25-hydroxyvitamin D-1 $\alpha$ -hydroxylase activity, E297  
 pH  
   acidification, testis and epididymis, E143  
   cytoplasmic, thyroid cell alkalization, E445  
   glycogenesis and glyconeogenesis, skeletal muscle, E693  
 Phenylalanine  
   effluxes, muscle protein breakdown in infection determined by, E856  
   metabolism, epinephrine effects, E948  
   protein metabolism and, muscle, after exercise, E92  
 Phlorizin, effects on food intake, lean and fatty rats, E476  
 Phorbol esters, stimulation, thyroid cell alkalization, E445  
 Pituitary  
   angiotensin II, paracrine actions of, prolactin release and, E619  
   anterior, voltage-dependent calcium currents in gonadotropes, E589  
   lactotrophs, electrophysiological responses, E311  
 Placenta: *see also* Fetus; Lactation; Pregnancy  
   eicosanoid production, E418  
   endothelin receptors in, thromboxane release and vascular resistance relations, E864

- glucose exchange and consumption with fetus, pregnancy (sheep), E360  
 growth hormone, maternal IGF-I and, pregnancy, E1014  
 lactogen receptors in, maternal liver, fasting and refeeding effects (sheep), E338  
 Plantaris muscle, free amino acids in, effect of fiber population and denervation, E485  
 Posture, interactive effects, exercise-induced ANP release, E775  
 Potassium  
   conductance, electrophysiological responses, E311  
   disposal, extrarenal, thyroid-sympathoadrenal interactions in, E428  
   total body, resting metabolic rate relations, E990  
 Pregnancy: *see also* Fetus; Lactation; Placenta  
   angiotensin II and vasopressin receptors, hepatocytes, E597  
   bioactive parathyroid hormone in, E549  
   catheterized, fetal-maternal glucose kinetics (sheep), E1006  
   internal milieu, growth-promoting properties of, E98  
   maternal IGF-I, placental growth hormone regulation of, E1014  
   placental-fetal glucose exchange (sheep), E360  
   vitamin D clearance in, E158  
 Progesterone, apoprotein B metabolism and (baboon), E172  
 Prolactin  
   release  
     aging effects, E799  
     pituitary angiotensin II effects, E619  
     single lactotroph response to, E24  
 Propranolol, norepinephrine release and, E999  
 Prorenin, conversion to renin, liver and kidney (monkey), E451  
 Prostaglandins  
   binding, myometrium, E740  
   release, vascular resistance and, placenta, E864  
 Protein  
   breakdown, muscle, infection, amino acid effluxes and, E856  
   deposition, increased, antibodies to adipocytes and, E985  
   metabolism  
     insulin and epinephrine effects, E117  
     maple syrup urine disease, E654  
     regulation of, during fasting, E907  
   synthesis  
     exercise and recovery, E821  
     heart mitochondria, E492, E503  
     heart mitochondria during hypertrophy, E511  
     insulin effects, skeletal muscle after exercise, E92  
     intense exercise, E249  
     whole body, oxidation of infused leucine and, E151  
   turnover  
     fasting and refeeding, E832  
     resting metabolic rate relations, E990  
 Protein kinase C, stimulation, thyroid cell alkalization, E445  
 Proteolysis, plasma amino acid and, healthy adults, E78  
 Pseudoketogenesis, hepatectomy and, E519

PTH: *see* Parathyroid hormone  
 Pyruvate, production, adipose tissue, E888

## R

- Radiodensitometric hybridization assay, angiotensinogen mRNA, nephrectomy effects, liver, E413  
 Receptors  
    $\beta$ -, skeletal fiber types, endurance training effects, E71  
   androgen, downregulation, penis, E46  
   angiotensin II, hepatocytes, pregnancy and, E597  
   CCK, control of food intake, E40  
   endothelin, placenta, vascular resistance and thromboxane relations, E864  
   insulin, absence of downregulation, hepatocytes in hyperinsulinemia, E352  
   insulin-like growth factor I  
     adult liver, E329  
     glucose transport stimulated by, fat cells, E534  
   lactogen, placenta, maternal liver (sheep), E338  
   lymphocyte  $\beta_2$ -receptors, catecholamines and, E191  
   vasopressin, hepatocytes, pregnancy and, E597  
 Renal artery, eicosanoids, gestation, E418  
 Renin  
   conversion of recombinant prorenin to, liver and kidney (monkey), E451  
   plasma activity, hypoxia effects, E243  
   release, inhibition by 14,15-EET, renal cortical slices, E269  
 Renin-angiotensin system, regulation of liver angiotensinogen, kidney renin mRNA levels and, E1  
 Resistance  
   insulin  
     dexamethasone-induced, evolution of, E748  
     diabetes and, vanadate effects, E459  
     exercise effects, aging and, E937  
     tyrosine-kinase and, E964  
   vascular, thromboxane release and, placenta, E864  
 Respiration, defective thermogenesis, brown fat in obesity, E320  
 Ribonucleic acid, messenger, angiotensinogen levels, liver, nephrectomy effects, E413  
 RU26752, steroid-induced hypertension and, E737  
 RU26988, intracerebroventricular infusion, aldosterone hypertension and, E649  
 RU28318, intracerebroventricular infusion, aldosterone-salt hypertension and, E482  
 Rubidium-86, fluxes, 1,25-dihydroxyvitamin D<sub>3</sub> effects, E643

## S

- Saralasin  
   prolactin release and, pituitary angiotensin II, E619  
   regulation of liver angiotensinogen, kidney renin mRNA levels and, E1  
 Sarthran, prolactin release and, pituitary angiotensin II, E619  
 Secretagogues, aldosterone, ANF effects on production, E51  
 Sepsis, triglyceride metabolism in, liver, E678

Sodium current, voltage-dependent, gonadotropes, centrifugal elutriation and, E589

Soleus muscle, free amino acids in, effect of fiber population and denervation, E485

Somatostatin-C, placental, regulation of maternal IGF-I, pregnancy, E1014

Somatostatin

- capsaicin-sensitive nerves, during hypoglycemia, awake state, E212
- secretion, mechanism of sympathetic neural regulation, E220
- synthesis, diabetic hypothalamus, E661

Somatotropin, mechanism, lactation (cow), E582

Spectroscopy, carbon-13 nuclear magnetic resonance, myocardial glycogen synthesis, diabetes and fasting, E184

Splanchnic nerve, sympathetic regulation, insulin, somatostatin and glucagon secretion, E220

Starvation: see Fasting

Steroid hormones, plasma protein-mediated transport, E394

Steroids, sex, cancellous bone osteopenia in ovariectomy, E673

Streptozotocin

- acute reduction of 1,5-anhydroglucitol and, E423
- diabetes effects, glutamine synthetase expression, muscle, E762

Subfornical organ, interleukin 1 $\beta$ -induced ACTH release and, E163

Substance P, capsaicin-sensitive nerves, during hypoglycemia, awake state, E212

Substrates

- flux, forearm, growth hormone and, E86
- oxidation, indirect calorimetry, E399
- plasma energy, cerebral ischemia, E767
- utilization, insulin-treated diabetics, E813

Sympathetic nervous system

- $\beta$ -adrenergic blockade, norepinephrine release, E999
- stimulation, galanin release during, pancreas, E436

Sympathetic neural regulation, mechanism of, insulin, somatostatin and glucagon secretion, E220

## T

Tachyarrhythmias, gastric, illusory self-motion, E304

Testis, acidification by, carbonic anhydrase in, E143

12-*O*-Tetradecanoylphorbol-13-acetate insulin binding and, pancreatic acini, E562

- stimulation, thyroid cell alkalization, E445

Thermogenesis

- defective, brown fat in obesity, E320
- indirect calorimetry, E399

Thromboxane, release, vascular resistance and, placenta, E864

Thyroid, sympathoadrenal interactions, potassium disposal and, E428

Thyroid cells, alkalization, stimulation by EGF, phorbol ester, and diacylglycerol, E445

Thyroid hormones

- plasma protein-mediated transport, E394
- regulation, obesity, brown fat, E7

Thyroparathyroidectomy, aluminum deposition and, bone, E576

Thyrotoxicosis, sympathoadrenal interactions, potassium disposal and, E428

Thyrotropin-releasing hormone, electrophysiological responses, lactotrophs, E311

Thyroxine, cardiac hypertrophy induced by, mitochondrial protein synthesis during, E511

Thyroxine deiodinase, defective regulation, brown adipose tissue, E7

Tissue, vascular, eicosanoid production, E418

Transforming growth factor- $\alpha$ , bone formation and resorption, E275

Triglycerides

- fatty acid cycle and, control of fat metabolism, exercise and, E382
- kinetics, sepsis, E678
- medium-chain, carnitine metabolism and, E944

3,5,3'-Triiodothyronine

- liver treated with, enhanced glycogenolysis in, E109
- production, multicompartmental analysis, E715

T<sub>3</sub>: see 3,5,3'-Triiodothyronine

Tyrosine, effluxes, muscle protein breakdown in infection determined by, E856

Tyrosine kinase

- insulin receptor, diabetes and, vanadate effects, E459
- insulin-sensitive, insulin action relations, E964

## U

UDP Glucuronyl transferase, low-calcium diet effects, liver and small intestine, E282

Uterus, prostaglandin binding, during gestation, parturition, and postpartum, E740

## V

Vagal nerves, feeding control and, E40

Vagotomy, control of food intake and, E40

Vanadate, impaired insulin action in diabetes and, liver, E459

Vasopressin

- receptors: see Receptors
- synthesis, diabetic hypothalamus, E661

Vitamin D

- 1,25-dihydroxy-, clearance, pregnancy, E158

- 25-hydroxyvitamin D-1 $\alpha$ -hydroxylase activity, parathyroid hormone-like peptide effects, E297

Vitamin D<sub>3</sub>

- cardiovascular function and, E134

- 1,25-dihydroxy-effects on vitamin D<sub>3</sub>-deprived islets, E643
- intestinal calbindin-D9k and, E377
- physical activity effects, E263
- production, low-calcium diet effects, E282

- 25-hydroxy-, dose effects on 1,25-dihydroxyvitamin D<sub>3</sub> production, E780
- production, 25-hydroxyvitamin D<sub>3</sub> dose effects, E780

## Z

Zona glomerulosa, aldosterone production, ANF effects, E51





# Author Index to Volume 21

- Abbott, W. G. H., E347  
Abe, Y., E1, E413  
Abrass, I. B., E937  
Abumrad, N. N., E907  
Ader, M., E1020  
Agarwal, M., E737  
Akanuma, H., E423  
Akanuma, Y., E423  
Akaoka, I., E423  
Akmal, M., E975  
Alberti, K. G. M. M., E86  
Aloia, J. F., E263  
Alvestrand, A., E878  
Anderson, J. M., E24  
Arimura, A., E163  
Arner, P., E888  
Asawa, T., E445  
Atkinson, S., E534  
Avogaro, A., E606
- Bailey, J. W., E850  
Bak, J. F., E957  
Balla, I., E555  
Balla, T., E555  
Balon, T. W., E92  
Banner, C., E757, E762  
Baron, A. D., E16  
Barrett, E. J., E184  
Barrett, P. H. R., E172  
Bauman, D. E., E582  
Beard, J. C., E937  
Beckner, M., E673  
Bergman, R. N., E899, E1020  
Bianchi, R., E715  
Bier, D. M., E78, E249  
Billaudel, B. J. L., E643  
Björkman, O., E813  
Bloch, C. A., E1006  
Blomqvist, G., E805, E813  
Blondel, O., E459  
Bode, H. H., E65  
Bogardus, C., E964  
Bolinder, J., E888  
Boll, G., E569  
Bonen, A., E693  
Bonnetfont, J. P., E654  
Bottomley, S., E352  
Bourdeau, A., E549  
Bravo, E. L., E51  
Bray, G. A., E476  
Brechtel, G., E16  
Bresson, J. L., E654  
Brodde, O.-E., E191  
Brodsky, I., E249  
Brooks, G. A., E203  
Brown, A. M., E589  
Brown, G. P., E418  
Brunengraber, H., E519  
Bruns, M. E., E377  
Buchanan, C., E534  
Buckenmeyer, P. J., E71  
Bukowiecki, L. J., E320  
Bulus, N., E907  
Bunker, J. E., E282  
Burke, J. F., E790  
Butler, P. C., E228
- Cain, K. C., E937  
Campbell, R. G., E948  
Campbell, W. B., E269  
Candas, B., E468  
Cantraine, F., E1014  
Carey, K. D., E172  
Caro, J. F., E534  
Carpenter, T. O., E297  
Carpentier, Y. A., E944  
Carpinelli, A. R., E1033  
Carraro, F., E382, E821  
Cartee, G. D., E390  
Castellino, P., E117, E878  
Caufriez, A., E1014  
Cazzuola, F., E715  
Cerqueira, M. D., E937  
Cherrington, A. D., E841  
Chevalier, B., E459  
Chiang, M., E98  
Chiasson, J. L., E597  
Childs, G. V., E589  
Christiansen, J. S., E86  
Clark, P. W., E701  
Cobelli, C., E519, E606, E1037, E1058  
Coderre, L., E597  
Collet, A., E320  
Comer, M., E338  
Copinschi, G., E1014  
Corbin, J. D., E871  
Corcuff, J.-B., E311  
Corley, K., E737  
Cornish, J., E708  
Couet, C., E78  
Coupe, C., E126  
Cournot, G., E549  
Crepaldi, G., E606  
Cronin, M. J., E24  
Curi, R., E1033
- Dahlan, W., E944  
Daloze, P., E519  
Danforth, E., Jr., E256  
D'Attellis, N. P., E944  
David, F., E519  
Davidson, M. B., E329  
Dax, E. M., E71  
DeFronzo, R. A., E117, E399, E878  
Delp, M. D., E775  
Del Prato, S., E117, E878  
Demers, L. M., E304  
D'Ercole, A. J., E338  
Des Rosiers, C., E519  
Devlin, J. T., E249  
DiGiacomo, J. E., E360  
DiMarchi, R., E234  
Dionne, R. A., E535  
Donovan, C. M., E625, E635  
Doria, A., E606  
DuBoise, T. D., Jr., E143  
Duffy, B., E311  
Duffy-Barbe, L., E311  
Duner, E., E606  
Dunning, B. E., E436  
Dunshea, F. R., E582
- Edwards, P. R., E394  
Eigler, F.-W., E191  
Ekins, R. P., E394  
Elahi, D., E799  
Elwyn, D. H., E944  
Englert, Y., E1014  
Enyedi, P., E555
- Fadda, G. Z., E975  
Falck, J. R., E269  
Faure, A. G., E643  
Fellingham, G. W., E937  
Feng, B., E757, E762  
Ferdegini, M., E715  
Fernandes, L. C., E1033  
Fernstrom, J. D., E661  
Fernstrom, M. H., E661  
Ferre, P., E126  
Fioretto, P., E606  
Flakoll, P., E907  
Flint, D., E985  
Flores, C. M., E235  
Ford, K. K., E158  
Forden, J. M., E368  
Forse, R. A., E832  
Fort, C., E649  
Fort, C. M., E482  
Foster, D. M., E172, E1041  
Fox, J., E282  
Frankenne, F., E1014  
Freemark, M., E338  
Frexes-Steed, M., E907  
Frim, D. M., E686  
Friman, G., E856  
Frizzell, R. T., E841  
Fukagawa, N. K., E78  
Fukui, K., E1, E413  
Fuller, S., E249  
Fürst, P., E944  
Futter, C., E985
- Gaposchkin, C. G., E543  
Garcia-Webb, P., E352  
Garlicki, J., E40  
Garneau, M., E519  
Géloën, A., E320  
George, F. W., E46  
Gerich, J., E569  
Gettys, T. W., E871  
Gibson, D. M., E109  
Gillatt, D. J., E930  
Girard, J., E126  
Girardi, E. P., E864  
Goldfarb, A. H., E71  
Golstein, J., E1014  
Gómez-Sánchez, C. E., E482  
Gómez-Sánchez, E. P., E482, E649  
Goodman, M. N., E92  
Goodyear, L. J., E667  
Gottschall, P. E., E163  
Grandis, A., E338  
Gray, D. H., E708  
Gray, R. W., E377  
Greenspan, S. L., E799  
Grier, B. L., E492, E503  
Grill, V., E805, E813  
Grosse-Wilde, H., E191
- Gutniak, M., E805, E813  
Gwosdow, A. R., E65
- Hagström, E., E888  
Hajmóczky, G., E555  
Halliday, D., E654  
Halter, J. B., E999  
Hamberger, B., E805  
Hannon, K. S., E673  
Happel, M., E191  
Hardy, K. J., E930  
Hargreaves, K. M., E235  
Harrison, T. S., E304  
Hartl, W. H., E821  
Hartle, D. K., E775  
Hasegawa, H., E562  
Havel, P. J., E436  
Hay, W. W., Jr., E360  
Haymond, M. W., E228, E850  
Heiling, V., E103  
Hendrick, G. K., E841  
Hennen, G., E1014  
Henrich, W. L., E269  
Herchuelz, A., E529  
Hermann, M., E529  
Hertelendy, F., E740  
Himmels-Hagen, J., E7  
Hirshman, M. F., E667  
Hitier, Y., E126  
Hoffer, L. J., E832  
Hogikyan, R. V., E999  
Holland, O. B., E32  
Hollander, A. M., E864  
Holloosy, J. O., E390  
Horton, E. D., E667  
Horton, E. S., E667  
Hosoi, M., E451  
Hott, M., E275  
Howard, B. V., E347
- Iervasi, G., E715  
Ikemoto, F., E451  
Imura, H., E220  
Ingbar, S. H., E428  
Ishizuka, Y., E451  
Iwao, H., E1, E413
- Jacquez, J. A., E727  
Jahoor, F., E288, E821  
Jansson, P.-A., E918  
Jenkins, A. B., E701  
Jensen, M. D., E103  
Jhamandas, K. H., E212  
Jørgensen, J. O. L., E86
- Kahn, S. E., E937  
Kalimi, M., E737  
Kamimura, M., E282  
Kates, A.-L., E7  
Katsuura, G., E163  
Kelley, D. E., E923  
Kestin, S., E985  
Khazanie, P., E534  
Kido, Y., E562  
Kim, S., E451  
Kim, S.-N., E134  
Kimura, S., E1, E413  
King, P. A., E667
- Cafilisch, C. R., E143
- Edelman, S. V., E16

- Klein, S., E32, E382  
 Klibanski, A., E799  
 Koch, K. L., E304  
 Kodack, L., E338  
 Koide, M., E562  
 Komiya, I., E445  
 Konagaya, M., E757  
 Konagaya, Y., E757  
 Konturek, P. K., E40  
 Konturek, S. J., E40  
 Korn, E. A., E297  
 Koves, K., E163  
 Kraegen, E. W., E701  
 Kubota, K., E428  
 Kumar, M. S. A., E65  
 Kurose, T., E220  
 Kushwaha, R. S., E172  
 Kwiczen, N., E40  
 Kwok, R. P. S., E661
- Labrie, F., E468  
 Lacoste, D., E468  
 Landau, B. R., E519  
 Landaw, E. M., E394  
 Langman, C. B., E158  
 Lanza-Jacoby, S., E678  
 Larson, V. G., E937  
 Larsson, J., E856  
 Lau, D. C. W., E368  
 Laughlin, M. R., E184  
 Lawrence, D. L., E243  
 Layman, D. K., E821  
 Lebrun, P., E529  
 Lecavalier, L., E569  
 Leonard, J. V., E654  
 Leung, A. C. F., E503, E511  
 Lifrak, E. T., E673  
 Linares, O. A., E999  
 Lindqvist, M., E813  
 Lipson, L. G., E975  
 Livett, B. G., E212  
 Long, C. L., E485  
 Lönnroth, P., E918  
 Lowe, C., E708  
 Lundgren, J., E767  
 Luzi, L., E117
- Machado, U. F., E1033  
 Maita, M. E., E864  
 Majka, J., E40  
 Majzoub, J. A., E686  
 Mamer, O. A., E519  
 Mandarino, L. J., E923  
 Manganello, G., E549  
 Mans, A., E767  
 Marchetti, C., E589  
 Marette, A., E320  
 Marie, P. J., E275  
 Marzetta, C. A., E1041  
 Massicotte, G., E597  
 Massry, S. G., E975  
 Matthews, D. E., E78, E948  
 Max, S. R., E757, E762  
 McAuliffe, T., E256  
 McCall, A. L., E543  
 McCarten, K., E780  
 McCourt, J. D., E492, E503  
 McDermott, J. C., E693  
 McKee, E. E., E492, E503, E511  
 Menon, R. K., E1006  
 Mento, P. F., E864  
 Michel, M. C., E191  
 Miles, J. M., E103, E850  
 Mill, J., E757  
 Mitnick, M. A., E297
- Miyashita, H., E423  
 Molina, J. M., E16  
 Möller, J., E86  
 Möller, N., E86  
 Molnár, M., E740  
 Montgomery, J. A., E519  
 Mott, D. M., E964  
 Mueller, G. P., E235  
 Mularoni, T., E338  
 Murakami, K., E451  
 Murthy, V. N., E1041  
 Myers, L. S., E619
- Nagano, M., E51  
 Nagasawa, Y., E445  
 Nair, K. S., E990  
 Nakamura, A., E1, E413  
 Nakamura, T., E562  
 Nakanishi, S., E1, E413  
 Narkewicz, M., E126  
 Nebioglu, D., E109  
 Nebioglu, S., E109  
 Nicoll, C. S., E98  
 Nishi, S., E220  
 Nogueira, C. R., E1033  
 Normand, M., E468  
 Norwich, K. H., E780  
 Nosadini, R., E606  
 Nyomba, B. L., E964
- Ohkubo, H., E413  
 Okabayashi, Y., E562  
 Okutani, T., E562  
 Olefsky, J. M., E16  
 Opoku, J., E737  
 Ørskov, H., E86  
 Ossowski, V. M., E964  
 Otsuki, M., E562
- Pacy, P. J., E654  
 Pagliassotti, M. J., E625, E635  
 Panton, D., E985  
 Pardridge, W. M., E394  
 Parker, L. N., E673  
 Partilla, J. S., E71  
 Pasieka, K. B., E686  
 Paulson, S. K., E158  
 Pedersen, O., E957  
 Perdereau, D., E126  
 Perheentupa, J., E275  
 Perry, T., E727  
 Perry, T. J., E999  
 Pesola, G., E948  
 Peters, E. J., E288  
 Petit, W. A., Jr., E184  
 Pilo, A., E715  
 Piñeyro, M. A., E71  
 Plasman, P. O., E529  
 Poehlman, E. T., E256  
 Portha, B., E459  
 Proietto, J., E748  
 Pruden, E. L., E109
- Quarles, L. D., E576
- Raineri-Maldonado, C., E534  
 Ravussin, E., E347  
 Ray, C. A., E775  
 Razzolini, R., E606  
 Read, D. M., E930  
 Redmon, J. B., E871  
 Reichard, P., E813  
 Reid, I. R., E708
- Reilly, J. P., E923  
 Rengo, F., E606  
 Richelle, M., E944  
 Ritchie, D. G., E57  
 Rizza, R. A., E228  
 Roark, R. R., E203  
 Robinson, B. G., E686  
 Rohács, T., E555  
 Rosella, G., E748  
 Rosen, S. G., E999  
 Rösle, C., E944  
 Rovner, A. S., E203  
 Rowe, J. W., E799  
 Rudel, L. L., E1041  
 Ruderman, N. B., E92, E543  
 Ruotolo, G., E347  
 Russell, J. C., E368  
 Russell, S. M., E98
- Saccà, L., E606  
 Saccamani, M. P., E1058  
 Sachs, C., E549  
 Sapolsky, R. M., E894  
 Sartor, P., E311  
 Saudubray, J. M., E654  
 Saunders, D. E., E134  
 Schiffrin, E. L., E597  
 Schmitz, O., E86  
 Schwartz, R. S., E937  
 Schwenk, W. F., E228  
 Scrimgeour, A., E249  
 Seaton, J. F., E304  
 Sechen, S. J., E582  
 Seifert, M. F., E377  
 Seino, Y., E220  
 Seitz, R. J., E813  
 Shenker, Y., E243  
 Sheorain, V. S., E871  
 Shillabeer, G., E368  
 Shimizu, Y., E445  
 Shinoda, T., E445  
 Shiratori, T., E297  
 Shulkes, A., E930  
 Shulman, R. G., E184  
 Siesjö, B. K., E767  
 Simon, J., E459  
 Simonson, D. C., E399  
 Simpson, R. U., E134  
 Sinha, M. K., E534  
 Sjölin, J., E856  
 Skatrud, J. B., E243  
 Skinner, S. J. M., E708  
 Smith, M. J., E999  
 Smith, U., E918  
 Soliman, A., E191  
 Spät, A., E555  
 Sperling, M. A., E1006  
 Steele, M. K., E619  
 Stern, R. M., E304  
 Stewart, A. F., E297  
 Stjernström, H., E856  
 St-Louis, J., E597  
 Stojanovska, L., E748  
 Stone-Elander, S., E805, E813  
 Storch, K. J., E790  
 Stratton, J. R., E937  
 Stuart, C. A., E821  
 Sung, S., E864  
 Supiano, M. A., E999  
 Sussman, I., E543  
 Sutter, B. C. J., E643
- Tabares, A., E678  
 Taborsky, G. J., Jr., E436  
 Takane, K. K., E46
- Takasu, N., E445  
 Tamaki, T., E1, E413  
 Taminato, T., E220  
 Tan, M. H., E693  
 Taupignon, A., E311  
 Taylor, I. L., E871  
 Thibault, G., E597  
 Thil-Trubert, C.-L., E549  
 Thomas, J. W., E757  
 Thompson, C. M., E667  
 Thompson, G. N., E654  
 Thompson, G. S., E492, E503  
 Thwaites, D., E649  
 Toffolo, G., E519, E606, E1037  
 Tombaugh, G. C., E894  
 Tornheim, K., E543  
 Treadway, J. L., E92  
 Trevisan, R., E606  
 Tsuda, K., E220  
 Tsuji, K., E220  
 Tsujii, S., E476  
 Turcotte, L. P., E203  
 Turinsky, J., E485  
 Turner, R. T., E673
- Ungerstedt, U., E888
- Van Tits, L. J. H., E191  
 Vasey, M. W., E304  
 Veith, R. C., E436, E937  
 Velussi, M., E606  
 Veneman, T., E923  
 Venkataraman, M. T., E649  
 Venkatesan, N., E329  
 Venuto, R. C., E418  
 Vieth, R., E780  
 Vigorito, C., E606  
 Vitek, F., E715
- Wagner, D. A., E790  
 Wahren, J., E856, E878  
 Wakley, G. K., E673  
 Walker, A. T., E297  
 Wallace, P., E16  
 Walser, M., E151  
 Walter, J. H., E654  
 Warner, M. L., E907  
 Wathanaronchai, P., E109  
 Weber, J.-M., E382  
 Weishaar, R. E., E134  
 Welle, S., E990  
 Widén, L., E805, E813  
 Wilkes, B. M., E864  
 Williams, P. E., E841  
 Wilson, J. D., E46  
 Wolfe, R. R., E32, E288, E382, E821  
 Wong, P. F., E282
- Yagi, M., E151  
 Yamada, T., E445  
 Yamamoto, K., E451  
 Yamanouchi, T., E423  
 Yeh, J. K., E263  
 Yoon, J. H., E899  
 Young, V. R., E78, E790
- Zech, L. A., E1041  
 Zhou, X.-F., E212  
 Zorzano, A., E92

